

CLAIMS :

1. In a dynamo electric machine with a stator and a permanent magnet type rotor, on or near circumferential surface of the rotor facing the stator p·n pieces of permanent magnet blocks are disposed, herein p is number of poles of the rotor and n is an integer equal to or more than 2, and each of the permanent magnet blocks satisfies the following conditions;

$$(\theta_i) - (\theta_{i+1}) = \pm (A_i \cdot p / 2) \quad \dots (1)$$

wherein, when assuming that clockwise direction is plus, A_i is an angle formed between radial center lines of i th permanent magnet block and $(i+1)$ th permanent magnet block, θ_i is an angle formed between magnetization direction of the i th permanent magnet block and the outward radial direction thereof, θ_{i+1} is an angle formed between magnetization direction of the $(i+1)$ th permanent magnet block and the outward radial direction thereof, and + in \pm is for the case of an inner rotor type dynamo electric machine and - in \pm is for an outer type dynamo electric machine.

2. A dynamo electric machine of claim 1, wherein the stator includes m pieces of salient poles disposed with an equal interval and satisfies the following condition;

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$$m/p \leq 1.5$$

... (2)

3. A dynamo electric machine of claim 1 or claim 2,
wherein when assuming that the outer diameter of the
5 rotor as r and the thickness of each permanent magnet
as t , the dynamo electric machine satisfies the
following condition;

$$t/r \geq 0.15$$

... (3)

10 4. A dynamo electric machine of any one of claims 1
through 3, wherein the rotor is provided with a
binding portion for binding the permanent magnet
blocks on or near the circumferential surface thereof.

15 5. A dynamo electric machine of claim 4, wherein the
binding portion is a groove provided on the
circumferential surface of the rotor.

20 6. A dynamo electric machine of claim 4, wherein the
binding portion is an aperture provided near the
circumferential surface of the rotor.

25 7. A dynamo electric machine of any one of claims 1
through 6, wherein each permanent magnet block is a
NdFeB sintered magnet.

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